IN THE CLAIMS

Claims 1-24 (canceled).

Please add the following new claims.

25. (New) A longitudinally flexible stent for expanding and implanting in a body lumen, comprising:

a plurality of undulating members expandable in the radial direction and interconnected to be generally aligned on a common longitudinal axis, each undulating member associated with shaped members selected from the group consisting of U-shaped members, Y-shaped members, and W-shaped members, at least one shaped member having a radius of curvature being different from a radius of curvature of at least one other shaped member;

a plurality of connecting elements interconnecting the undulating members, the connecting elements configured to interconnect at least two undulating members; and

wherein the undulating members and the connecting elements are configured to form at least one of the Y-shaped members and W-shaped members.

26. (New) The stent of claim 25, wherein each undulating member is formed of a structural member which, in cross-section, has an aspect ratio of less than two to one.

27. (New) The stent of claim 26, wherein the structural member is formed of a biocompatible material selected from the group consisting of stainless steel, titanium, tungsten, tantalum, superelastic NiTi alloys and thermoplastic polymers.

28. (New) The stent of claim 25, wherein at least a portion of the stent is coated with a biocompatible coating.

29. (New) The stent of claim 25, wherein the undulating members include U-shaped members in an in-phase configuration.

30. (New) The stent of claim 25, wherein the undulating members include U-shaped members in an out-of-phase configuration.

31. (New) The stent of claim 25, wherein adjacent undulating members are connected by at least two connecting elements.

32. (New) The stent of claim 25, wherein adjacent undulating members are connected by at least three connecting elements.

33. (New) The stent of claim 25, wherein adjacent undulating members are connected by at least four connecting elements.

34. (New) The stent of claim 25, wherein every pair of adjacent undulating members is interconnected by the connecting elements.

35. (New) A longitudinally flexible stent for expanding and implanting in a body lumen, comprising:

a plurality of undulating members expandable in the radial direction and interconnected to be generally aligned on a common longitudinal axis, each undulating member in the form of a generally serpentine pattern having a first curve and second curve, the first curve having a radius of curvature different from a radius of curvature of the second curve; and

a plurality of connecting elements interconnecting the undulating members, the connecting elements configured to interconnect at least two undulating members.

36. (New) The stent of claim 35, wherein each undulating member is formed of a structural member which, in cross-section, has an aspect ratio of less than two to one.

37. (New) The stent of claim 36, wherein the structural member is formed of a biocompatible material selected from the group consisting of stainless steel, titanium, tungsten, tantalum, superelastic NiTi alloys and thermoplastic polymers.

38. (New) The stent of claim 35, wherein at least a portion of the stent is coated with a biocompatible coating.

39. (New) The stent of claim 35, wherein the undulating members include U-shaped members in an in-phase configuration.

40. (New) The stent of claim 35, wherein the undulating members include U-shaped members in an out-of-phase configuration.

41. (New) The stent of claim 35, wherein adjacent undulating members are connected by at least two connecting elements.

42. (New) The stent of claim 35, wherein adjacent undulating members are connected by at least three connecting elements.

43. (New) The stent of claim 35, wherein adjacent undulating members are connected by at least four connecting elements.

44. (New) The stent of claim 35, wherein every pair of adjacent undulating members is interconnected by the connecting elements.

45. (New) A longitudinally flexible stent for expanding and implanting in a body lumen, comprising:

a plurality of undulating members expandable in the radial direction and interconnected to be generally aligned on a common longitudinal axis, each undulating member associated with U-shaped members and Y-shaped members, the U-shaped members having a radius of curvature different from a radius of curvature of the Y-shaped member; and

a plurality of connecting elements interconnecting the undulating members, the connecting elements configured to interconnect at least two adjacent undulating members.

46. (New) The stent of claim 45, wherein each undulating member is formed of a structural member which, in cross-section, has an aspect ratio of less than two to one.

47. (New) The stent of claim 45, wherein each undulating member is formed of a structural member which, in cross-section, has an aspect ratio of less than two to one.

48. (New) The stent of claim 47, wherein the structural member is formed of a biocompatible material selected from the group consisting of stainless steel, titanium, tungsten, tantalum, superelastic NiTi alloys and thermoplastic polymers.

49. (New) The stent of claim 45, wherein at least a portion of the stent is coated with a biocompatible coating.

50. (New) The stent of claim 45, wherein the undulating members include U-shaped members in an in-phase configuration.

51. (New) The stent of claim 45, wherein the undulating members include U-shaped members in an out-of-phase configuration.

52. (New) The stent of claim 45, wherein adjacent undulating members are connected by at least two connecting elements.

53. (New) The stent of claim 45, wherein adjacent undulating members are connected by at least three connecting elements.

54. (New) The stent of claim 45, wherein adjacent undulating members are connected by at least four connecting elements.

55. (New) The stent of claim 45, wherein every pair of adjacent undulating members is interconnected by the connecting elements.